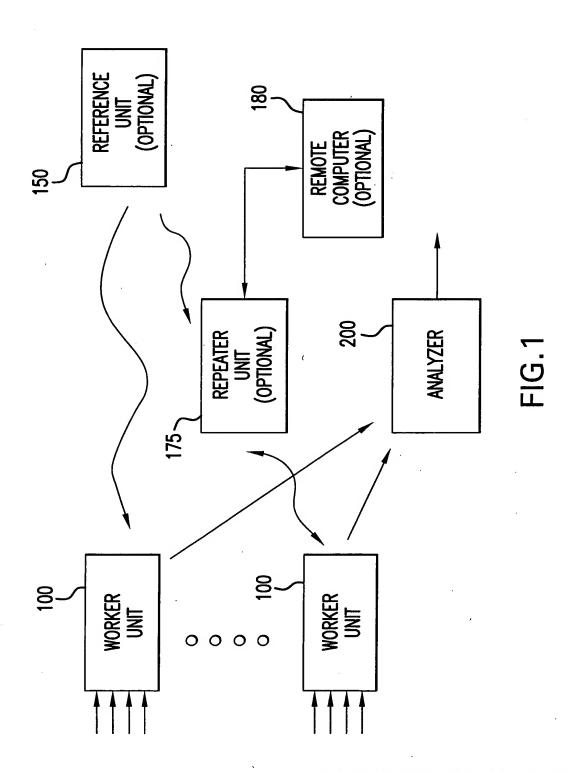


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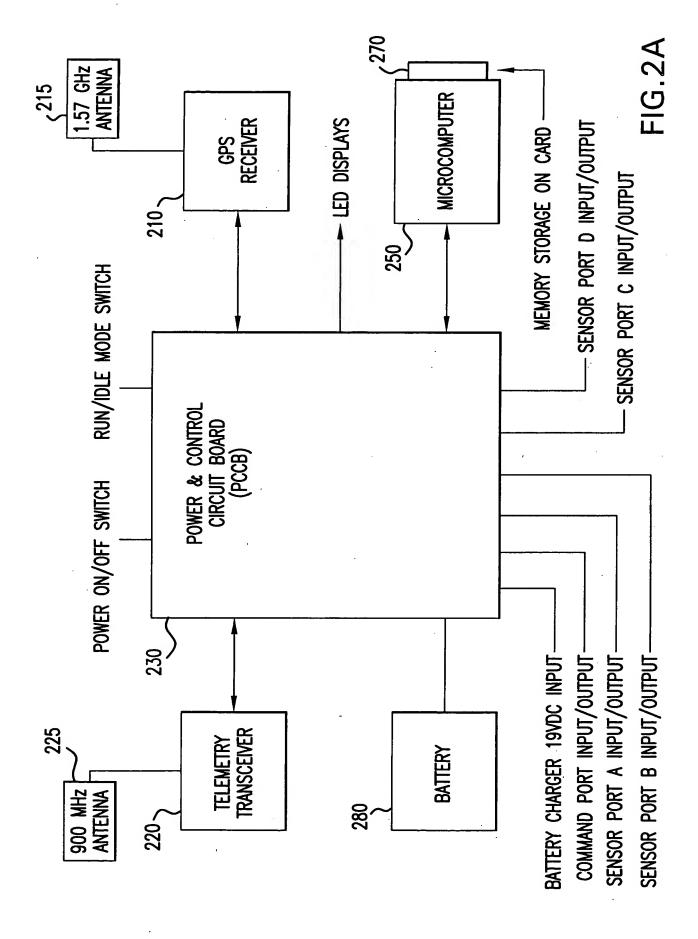
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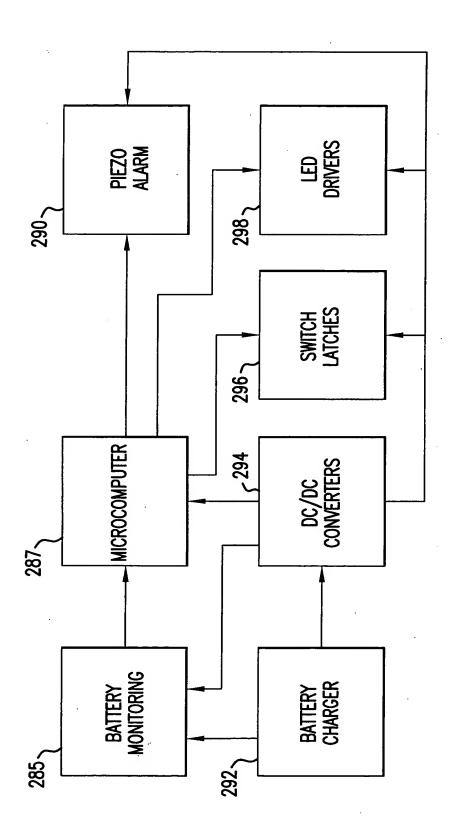
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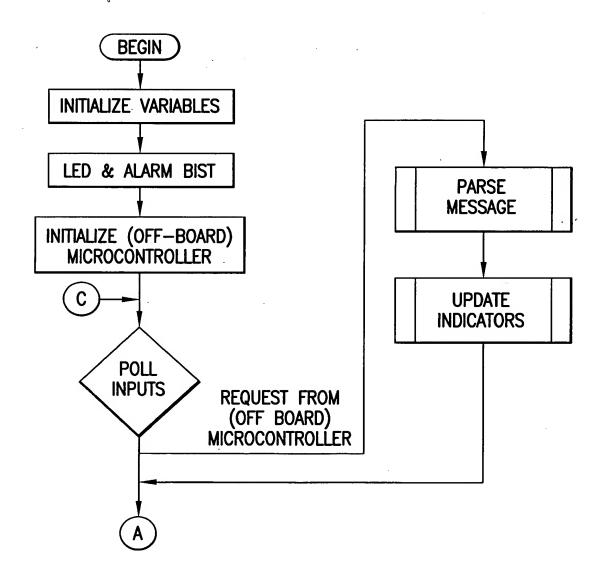
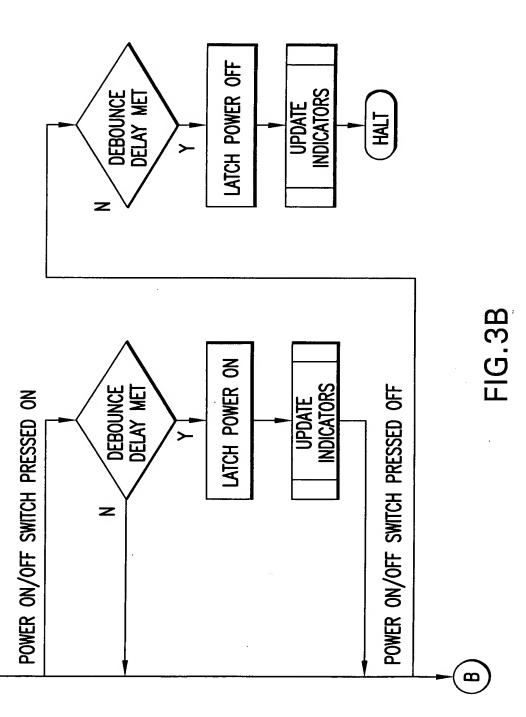


FIG.3A

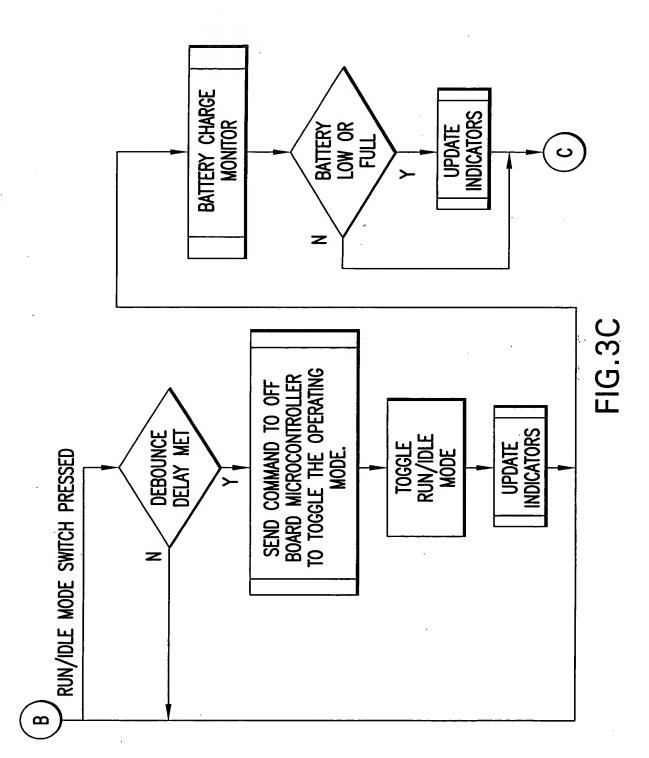
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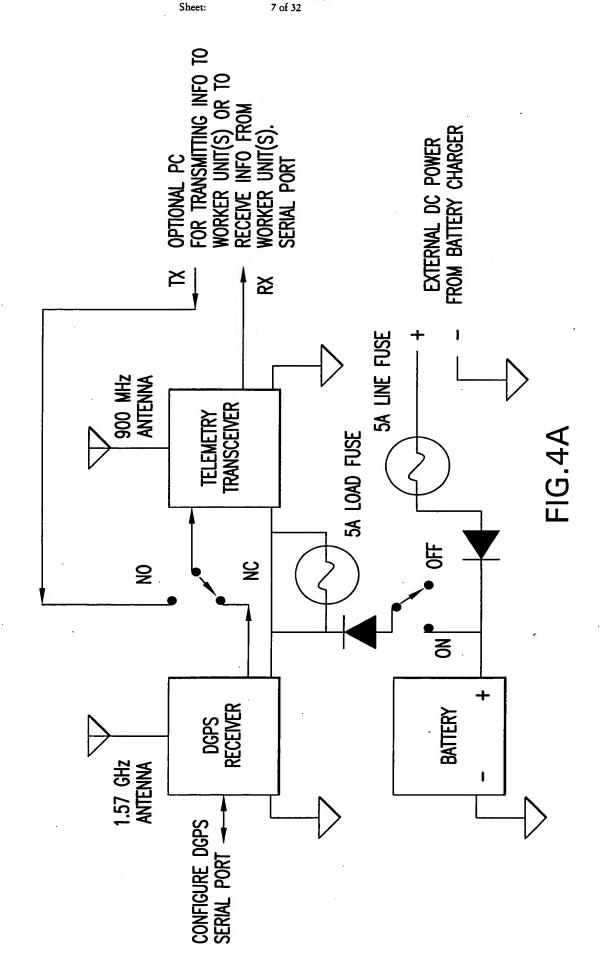


Lee et al.

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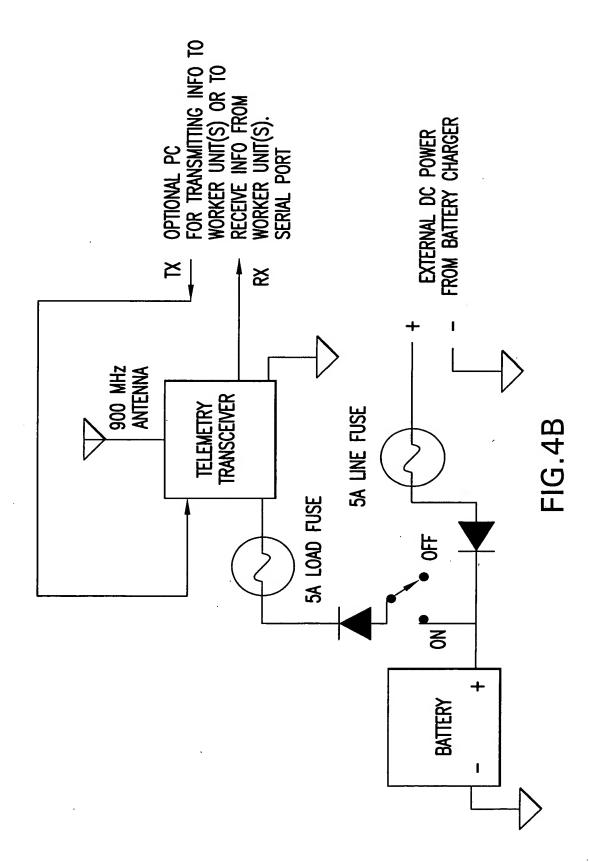
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X D			
	LPS DATA RECEIVED	DATE/TIME LATITUDE LONGITUDE ALTITUDE POS. CONFIDENCE [INVALID QUALITY INFORMATION LPS SENSOR PORT A	LPS SENSOR PORT B LPS SENSOR PORT C LPS SENSOR PORT D
	DATA LOGGING INTERVAL	O HOURS O MINUTES O SECONDS LPS UNIT ID LPS TIME ZONE	
LPS MK3 PROGRAM INTERFACE	SENSOR PORT ASSIGNMENT	LPS SENSOR PORT A INO SENSOR ATTACHED LPS SENSOR PORT B INO SENSOR ATTACHED LPS SENSOR ATTACHED LPS SENSOR PORT C INO SENSOR ATTACHED LPS SENSOR ATTACHED □	

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		LPS DATA RECEIVED	DATE/TIME LATITUDE LONGITUDE ALTITUDE INVALID QUALITY INFORMATION LPS SENSOR PORT A LPS SENSOR PORT B LPS SENSOR PORT C LPS SENSOR PORT C	
		DATA LOGGING INTERVAL	O HOURS O MINUTES O SECONDS LPS UNIT ID LPS TIME ZONE	LN 15 COL. 1 REC TRK - EXT
INTERFACE		IN)) (1) (2) (3) (3) (4) (4) (5) (4) (5) (4) (5) (5) (5) (6) (6) (6) (7)	AT 7.2"
≩		ASSIGNME	T A SENSOR T B T B HED SENSOR TARED SIM SENSOR THED	8/15
LPS MK3 PROGRAM	FILE COMMANDS HELP	SENSOR PORT ASSIGNMENT	LPS SENSOR PORT A UMd TEMPERATURE SENS LPS SENSOR PORT B MIE PERSONAL DATARAM NO SENSOR ATTACHED MIE PERSONAL DATARAM Phds 4-cas monitor Quest tech. 2900 SLM NO SENSOR ATTACHED	3 SEC. 1
LPS			그리 그렇 그었을리장 (2)	PAGE 8

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	LPS DATA RECEIVED	DATE/TIME	IATITIDE	ראוווטטר	LONGITUDE	ALTITUDE	DOS CONFIDENCE	INVALID QUALITY INFORMATION	LPS SENSOR PORT A		LPS SENSOR PORT B	LPS SENSOR PORI C	LPS SENSOR PORT D		
												·			돐
	3 INTERVAL				S	SC									REC TRK - EXT
	DATA LOGGING INTERVAL		1 1	O HOURS	O MINUTES	© SECONDS	<u> </u>	2	ZONE						COL. 1
	0					•	OI TIMIT OUT		LPS TIME ZONE						LN 14
RFACE				Ŋ		Þ		P			>	_			AT 3.4"
M INTE		EW UNIT	A	SENSOR	В	RAM	S			0					9/16
LPS MK3 PROGRAM INTERFACE	FIGURATION F	reset interface — Ni exit	LPS SENSOR PORT A	UMd TEMPERATURE SENSOR	LPS SENSOR PORT B	MIE PERSONAL DataRAM	LPS SENSOR PORT C	NO SENSOR ATTACHED		LPS SENSOR PORT D	NO SENSOR ATTACHED				SEC. 1
LPS MK3 PROGR	LOAD CON SAVE CON	RESET INI EXIT	IPS SE	IL PWN	LPS SE	MIE PE	LPS SE	NO SE		LPS SI	NO SE				PAGE 9

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INVALID QUALITY INFORMATION LPS DATA RECEIVED PS SENSOR PORT PORT PORT SENSOR PORT POS. CONFIDENCE SENSOR SENSOR DATE/TIME ONGITUDE LATITUDE ALTITUDE S \mathbb{S} 꿉 ı 罴 DATA LOGGING INTERVAL REC SECONDS O MINUTES O HOURS 8 JPS TIME ZONE LPS UNIT I 3 3.1" LPS MK3 PROGRAM INTERFACE A REQUEST CONFIGURATION DATA REQUEST UNIT: GO IDLE MODE REQUEST UNIT: GO RUN MODE TERMINATE LPS DATA STREAM REQUEST LPS DATA STREAM SEND CONFIGURATION DATA 9/15 REQUEST TIME ZONE SET TIME ZONE NO SENSOR ATTACHED NO SENSOR ATTACHED LPS SENSOR PORT C LPS SENSOR PORT D FILE COMMANDS HELP REQUEST UNIT ID SEC. SET UNIT ID φ,

FIG.5D

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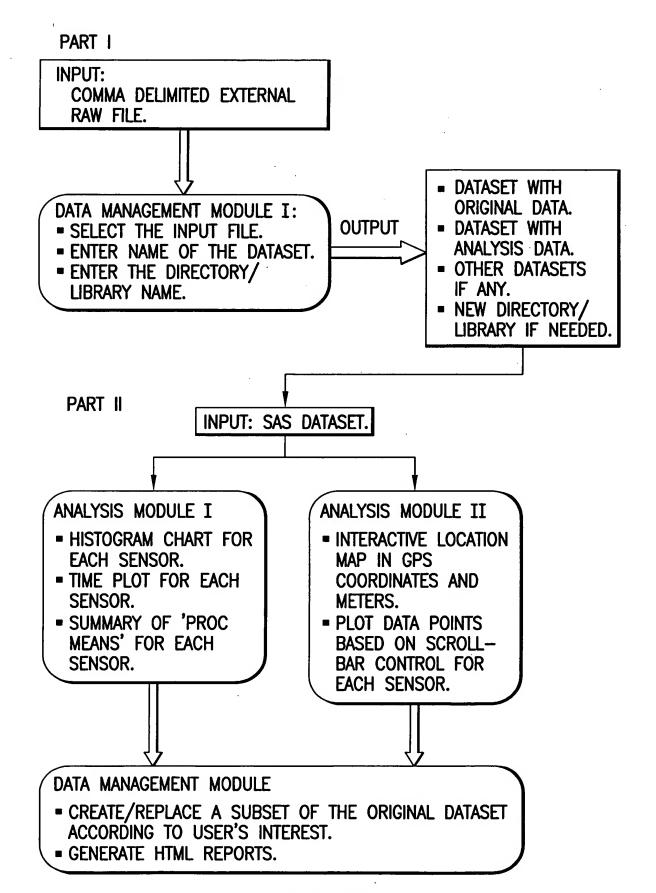
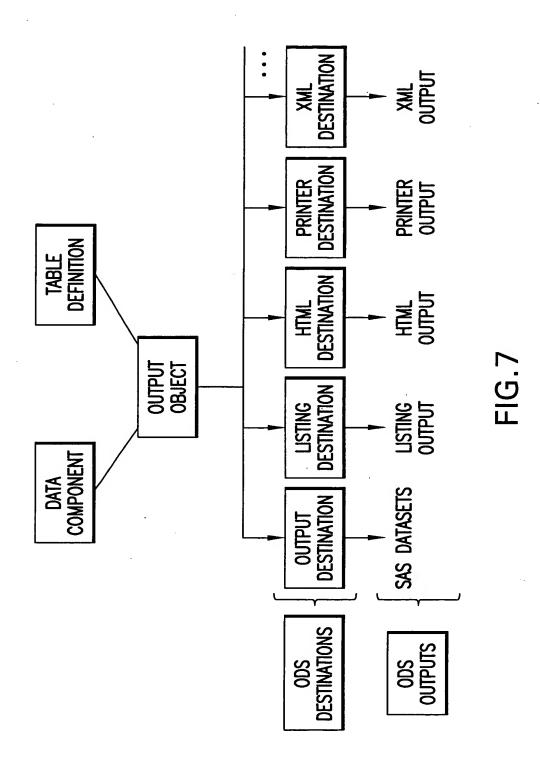


FIG.6

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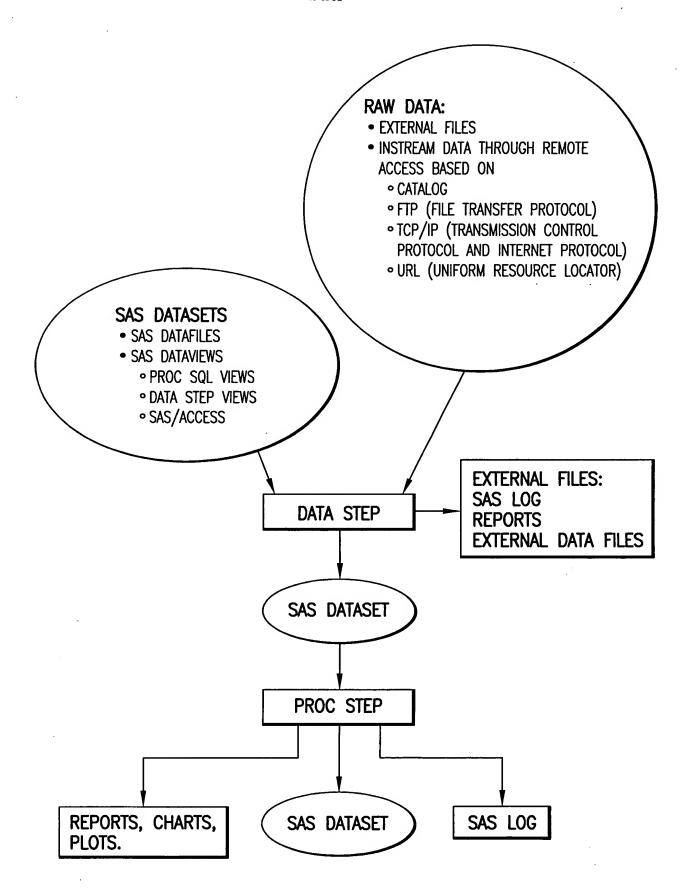


FIG.8

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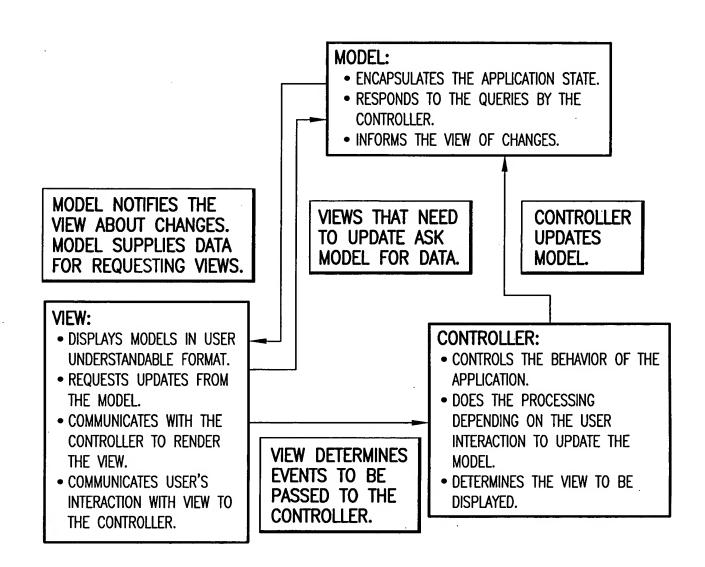


FIG.9

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LPS USER ANALYSIS SOFTWARE

CREATE A NEW DATASET FROM TEXT FILE USE EXISTING SAS DATASET

SENSORS 1000 TO LA LM SEC	SELECT LIBRARY NAME
SELECT A FILE 1010 A:\DATA020731r001.TXT \Browse	ENTER DATASET NAME
ENTER DATASET NAME 1020 CHARLOTTE	
SELECT LIBRARY NAME 1030 MYSASLIB BROWSE	
ANALYZE 1040	ANALYZE
SET REFERENCE POINT 1050 [LONGITUDE]	SET REFERENCE POINT LONGITUDE
LATITUDE	LATITUDE
<u>Ş</u> ET	SET

FIG.10

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<u> </u>		Non-Selection	Landar Source and Source	1.50"
Obs:	STAT	DUST	::LAVG	LMAX
\$13	N	2032.00	2032.00	2032.00
2.	MIN	718.00	51.60	51.60
3	MAX	952.00	91.20	93.40
4	MEAN	763.48	64.55	66.07
5.	STD	16.75	8.17	8.61
6	N (>0)	2032.00	•	•
₹7€	GMN	763.31		
8	GSD	1.02	•	•

FIG.11A

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(FEE)	ketertrings	المائية المائية			arerita	स्क्रास सम्बद्ध	17:53:53		anarara
1, 2	POSITION,			: LAT					
	CONFI	<i></i>	DATETIME	* *** ********************************	METERS.	201.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			
21:		N	01JAN60:00:33:52.0	2032.00	2032.00	2032	2032	2032.0	2032.0
2:		MIN	23MAY02:10:24:22.0	-635.54	-26.38	325	718	51.6	51.6
3.		MAX	23MAY02:10:58:41.0	53.52	142.32	511	952	91.2	93.4
4.		MEAN	23MAY02:10:41:29.9	-380.63	69.36	356	763	64.5	66.1
-5		STD	01JAN60:00:09:55.7	208.23	52.73	29	17	8.2	8.6
-6	2DD	N	01JAN60:00:04:16.0	256.00	256.00	256	256	256.0	256.0
3.7	2DD	MIN	23MAY02:10:24:32.0	-635.48	-2.58	330	747	51.6	51.6
.8	2DD	MAX	23MAY02:10:58:05.0	52.29	142.32	389	812	81.2	83.2
9	2DD	MEAN	23MAY02:10:44:14.5	-469.84	79.39	362	762	65.3	66.7
10:	2DD	STD	01JAN60:00:06:37.8	145.32	49.49	15	10	8.0	8.4
	2DU	N.	01JAN60:00:00:17.0	17.00	17.00	17	17	17.0	17.0
12	2DU	MIN	23MAY02:10:33:37.0	-551.90	-11.77	344	746	51.7	52.0
13	2DU	MAX	23MAY02:10:51:13.0	-401.20	115.67	411	871	71.5	73.3
14	2DU	MEAN	23MAY02:10:46:32.1	-476.12	44.39	360	770	57.3	58.2
15	2DU	STD	01JAN60:00:05:35.7	68.27	53.07	16	31	6.1	6.6
16.	3DD	N	01JAN60:00:23:03.0	1383.00	1383.00	1383	1383	1383.0	1383.0
17	3DD	MIN	23MAY02:10:24:22.0	-635.54	-8.23	325	718	51.6	51.6
18	3DD	MAX	23MAY02:10:58:41.0	53.52	142.19	405	952	91.2	93.4
19	3DD	MEAN	23MAY02:10:39:19.2	-321.99	78.58	348	764	65.1	66.6
20.	3DD	STD	01JAN60:00:10:45.6	216.45	51.17	16	18	8.2	8.6
21	3DU	N	01JAN60:00:06:03.0	363.00	363.00	363	363	363.0	363.0
22	3DU	MIN	23MAY02:10:29:47.0	-627.36	-26.38	332	734	51.6	51.6
23	3DU	MAX	23MAY02:10:51:26.0	-272.03	116.57	511	829	79.0	80.3
24	3DU	MEAN	23MAY02:10:47:55.2	-533.97	26.78	386	761	62.4	63.9
25	3DU	STD	01JAN60:00:03:12.8	79.69	37.98	49	12	7.9	8.5
26	CDR	N	01JAN60:00:00:13.0	13.00	13.00	13	13	13.0	13.0
27	CDR	MIN	23MAY02:10:33:17.0	-459.51	111.39	344	755	61.3	62.4
28	CDR	MAX	23MAY02:10:33:36.0	-449.85	112.66	344	786	68.4	70.1
29		MEAN	23MAY02:10:33:27.3	-455.80	112.18	344	769	64.5	66.1
30.	CDR	STD	01JAN60:00:00:07.1	4.89	0.64	0	11	1.6	1.9

FIG.11B

77.60

79.70

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66.10 58.85 54.30

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VARIABLE: DUST

QUANTILES (DEFINITION 5)

952 826

790

38

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QUANTILES (DEFINITION

VARIABLE: LMAX

(S NOI	ESTIMATE	91.2	82.0	78.0	75.7	70.9	64.5	57.5	53.6	52.3	51.6	51.6
(DEFINITION 5)				灭			N)					44
 QUANTILES	UANTILE	30% MAX			%(5% 03	O% MEDI/	5% 01)%	2	2	NIN 2
Ğ	Ō);;	6	6	<u></u> 6	1/3	5	.5)	Ŝ		Ö

89/ 759 754

749

75

741

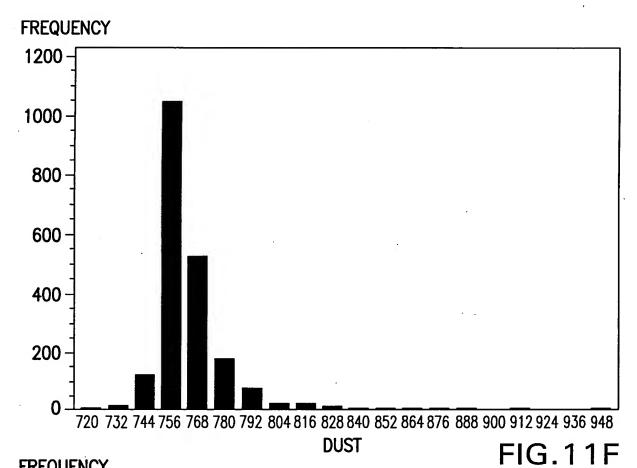
FIG. 11C

FIG.11E

51.60

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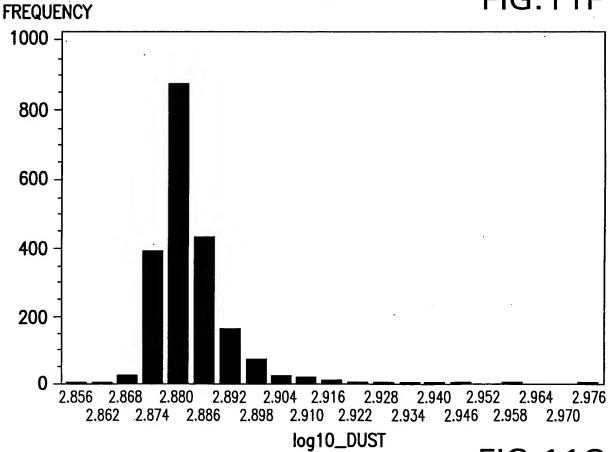


FIG.11G

Inventor:

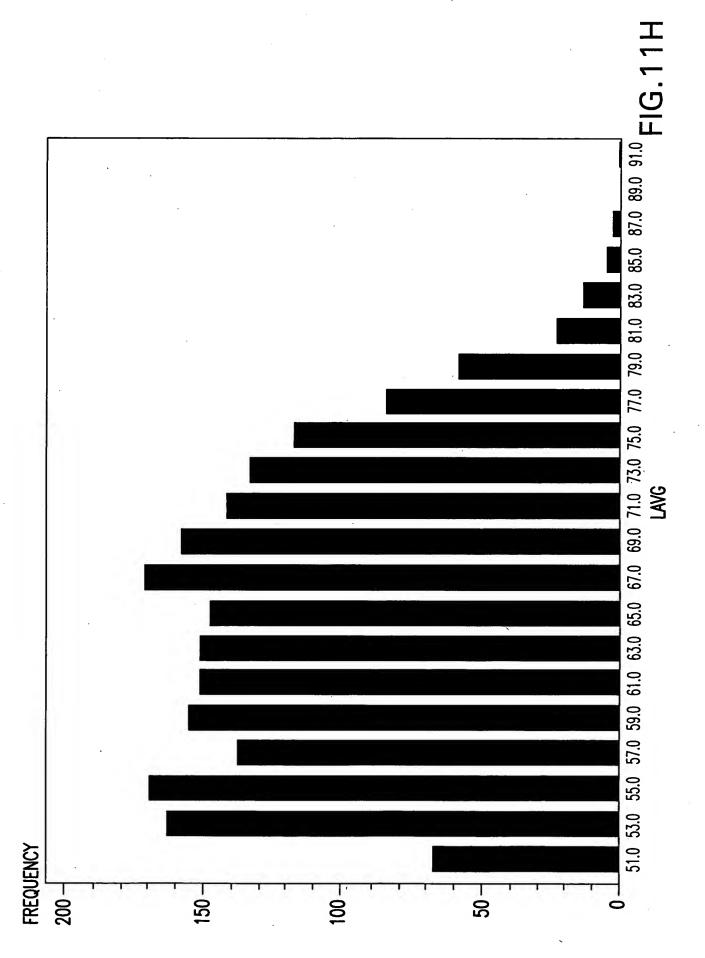
Title:

Lee et al.

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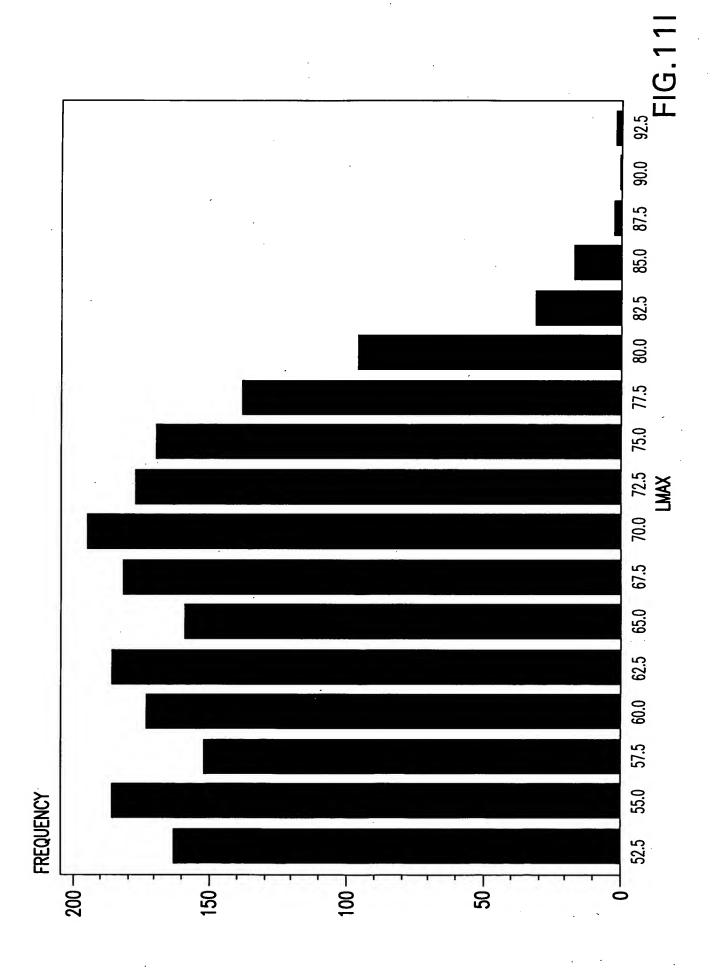
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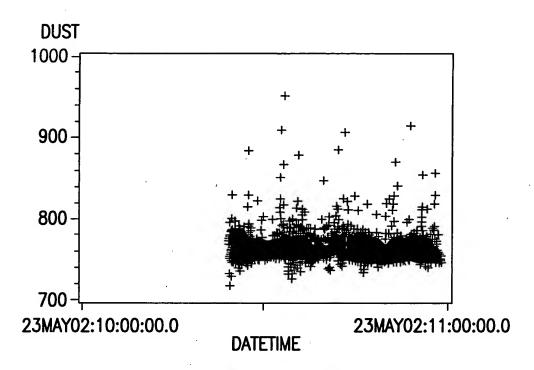
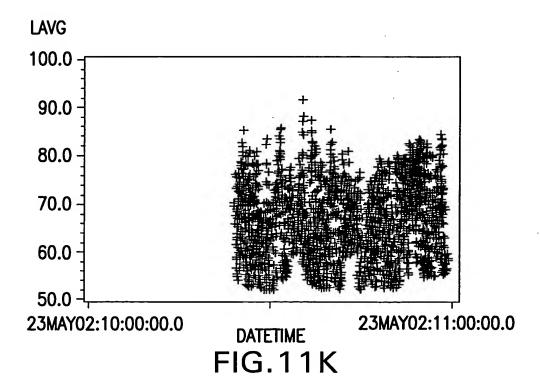


FIG.11J



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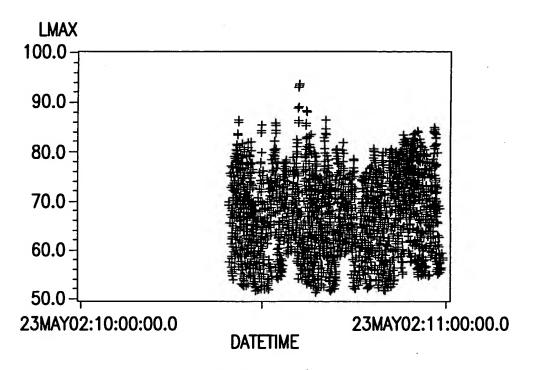


FIG.11L

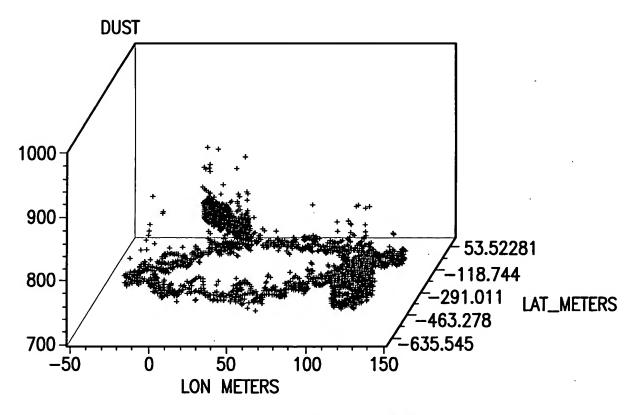


FIG.11M

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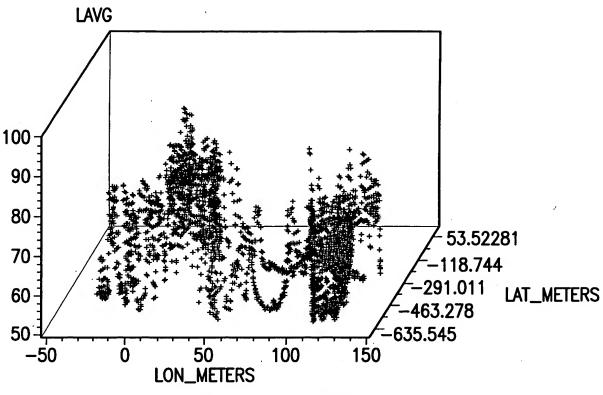


FIG.11N

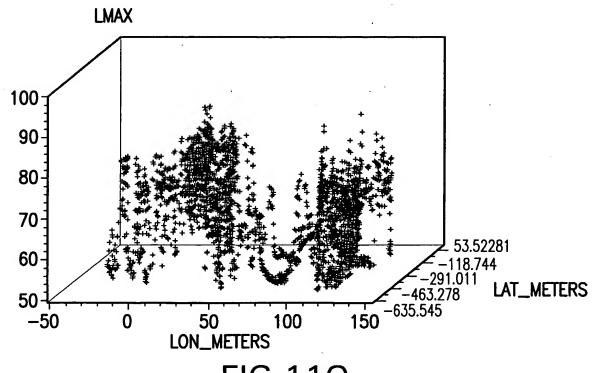
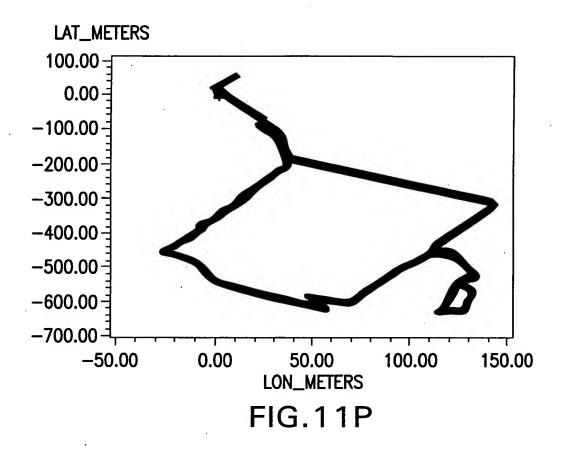
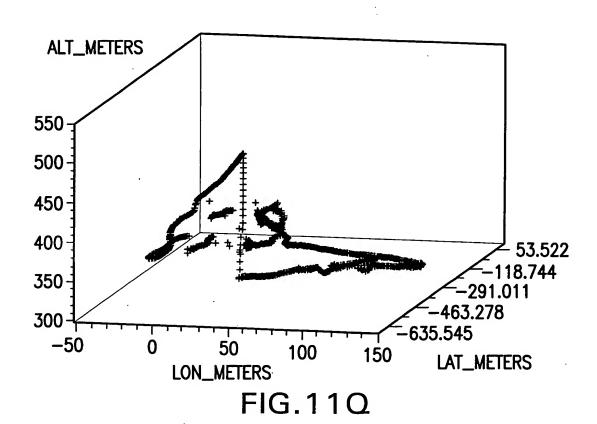


FIG.110

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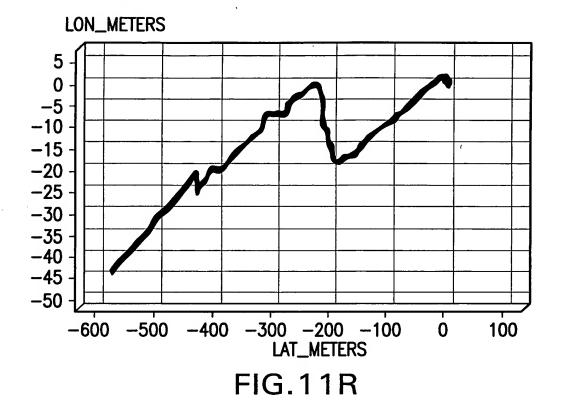
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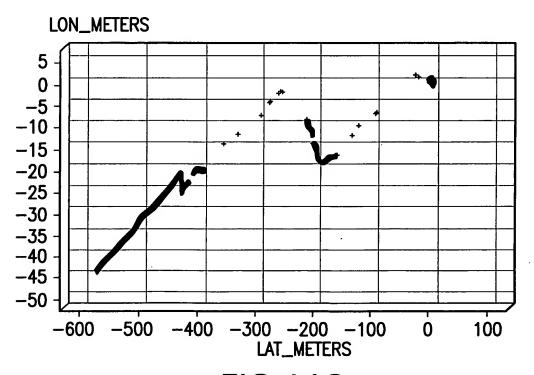


FIG.11S

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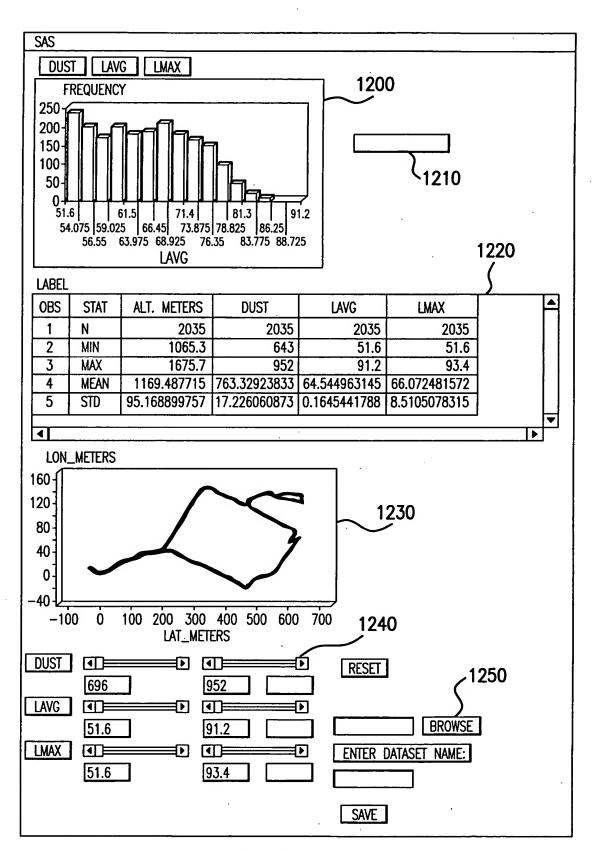


FIG. 12

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LPS ANALYSIS REPORT THE MEANS PROCEDURE

VARIABLE	N	MEAN	STD. DEV.	MINIMUM	MAXIMUM
DUST	2032	763.4832677	16.7478686	718.0000000	952.0000000
LMAX	2032	66.073868	8.6120598	51.6000000	93.4000000
LAVG	2032	64.549154	8.1664903	51.6000000	91.2000000

LPS ANALYSIS REPORT

THE UNIVARIATE PROCEDURE VARIABLE: DUST

QUANTILES (DEFINITION 5)						
QUANTILE	ESTIMATE					
100%	952					
99%	826					
95%	790					
90%	780					
75% Q3	768					
50% MEDIAN	759					

FIG.13

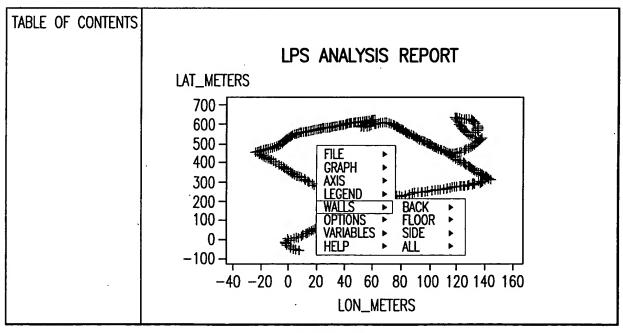


FIG. 14

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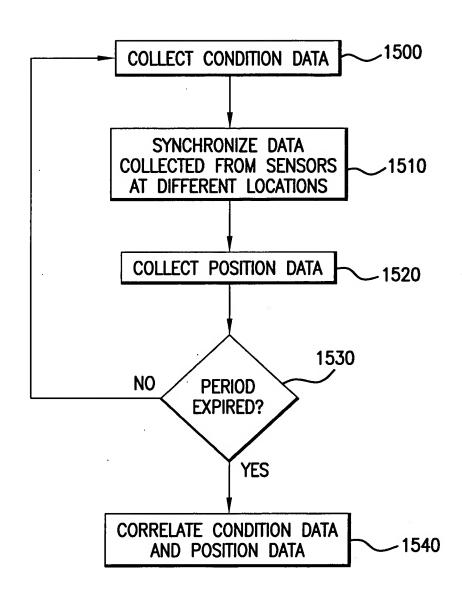


FIG.15

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CLIENT MACHINE WEB SERVER MACHINE LPS SOFTWARE CLIENT VERSION IN FORM OF JAVA APPLETS FOR LSPs **WEB SERVER** WEB BROWSER MESSAGE ROUTER HTTP SAS/CONNECT DRIVER FOR JAVA APPLET OR SAS/SHARE DRIVER SESSION AGENT FOR JDBC APPLET SAS SERVER MACHINE SAS/SHARE SERVER OR SAS/CONNECT SERVER **SENSOR NETWORK** SAS/AF DATA **OBJĖCTS SOURCES**

FIG.16

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